MANAGEMENT PLAN

November 2003

for:

Desolation Sound and Copeland Islands Marine Parks and Tux'wnech Okeover Arm Provincial Park

Ministry of Water, Land and Air Protection

BC Parks

105-00810/

Desolation Sound Marine Park

Copeland Islands Marine Park

Tux'wnech Okeover Arm Provincial Park

MANAGEMENT PLAN

Environmental Stewardship
Lower Mainland Region

BC Parks

Desolation Sound and Copeland Islands
Marine Parks and Tux'wnech
Okeover Arm Provincial Park

MANAGEMENT PLAN

November 2003

Approved by:

_____ Date: _____

Regional Manager

_____ Date:_____

Assistant Deputy Minister

Note to Readers:

Provincial parks are managed by the Environmental Stewardship Division of the Ministry of Water, Land and Air Protection. BC Parks is one component of Environmental Stewardship and in this document, the term BC Parks is used to represent the Environmental Stewardship Division.

This management plan provides direction for Desolation Sound Marine Park, Copeland Islands Marine Park and Tux'wnech Okeover Arm Provincial Park. In this document the term "Desolation Sound Parks" is used to collectively represent all three parks. Desolation Sound and Copeland Island Marine Parks are also referred to as the "Marine Parks".

Tux'wnech Okeover Arm Provincial Park within this document is also referred to as Okeover Arm Park.

Occasionally the term "Protected Areas" or "Protected Area Strategy" is used to refer to broader Provincial policies and land use planning processes that refer to both Provincial Parks and other forms of Protected Areas.

Malaspina Provincial Park is also located in this region but is covered under its own specific Malaspina Provincial Park Management Plan.

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BC Parks staff prepared this management plan with assistance from the Desolation Sound Parks Planning Advisory Group. Members of this group represented a wide spectrum of the Lund and Powell River communities including local resident, recreation, business, regional district, and environmental interests. All of the following individuals attended one or more of the Advisory Group meetings:

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Staff of the Environmental Stewardship Division of the Lower Mainland Region and Victoria Headquarters provided useful comments and suggestions.

BC Parks would like to thank those who took the time to attend workshops and make written submissions to assist in the development of this plan.

EXECUTIVE SUMMARY

This section will be completed at the conclusion of First Nation and public consultations in the fall of 2003.

INTRODUCTION

Management Planning Process

BC Parks prepares management plans to guide provincial park management over the next ten to twenty years[1]. The plan sets out objectives and actions for management of conservation and recreation values and for operation of the park. A management plan relies on current information on natural and cultural attributes and recreation opportunities within a park and on land management activities occurring on surrounding lands.

The process for preparing a management plan involves a careful analysis of the overall goals of the park, use patterns, key values of the park, and appropriate management objectives. Through the planning process, various options for managing the park are developed and assessed. In choosing the most appropriate option, the intent is to ensure the management decisions protect the values of the park and that human use within and adjacent to the park does not result in unacceptable impacts.

A management plan not only establishes long-term management direction for a park, but also gives direction for immediate issues. As a result, a management plan contains numerous statements describing management actions to be undertaken.[2] As BC Parks is unable to carry out all action items at the same time, the management plan also sets priorities for management actions.

Management plans are prepared with a high degree of public involvement. The general public and stakeholder groups have opportunities to review management planning documents and provide comments to BC Parks through a variety of means including public meetings and review of documents. Similarly, BC Parks consults with First Nations, other levels of government and other provincial government agencies in the development and review of management plans. In certain instances, a public advisory committee helps prepare the management plan and may function as a partner with BC Parks in implementing the plan and monitoring progress.

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[1] While management plans are initially developed to guide the management of a park for a 5 to 10 year period, a number of factors will influence how long the plan will be valid. Should this management plan still provide appropriate management direction for these parks after 10 years, and still be appropriate with respect to the goals and vision of the parks, the plan may still be deemed appropriate until such a time that updating or re-writing is required.

[2] While key items are identified, it should be noted that the completion of all items is subject to funding and funding procedures. As such, items are prioritized and completed as funding permits. As well, all development within Provincial Parks is subject to the BC Parks Impact Assessment Policy.

The planning process for Desolation Sound Parks consisted of the following:

- Field work by parks staff in 2002 and 2003.
- Initial discussions with Sliammon First Nation and Powell River Regional District in October 2002.
- Public open house in Lund in October 2002.
- Further exploratory discussions with Sliammon First Nation during the winter and spring of 2003.
- Five public advisory group meetings November-March 2003.
- Public open house on draft plan in November 2003.
- Review of draft plan by public and stakeholders.
- Completion of plan in March 2004.

Background Summary

The Desolation Sound Parks are located approximately 30 km to the northwest of Powell River, British Columbia in the Desolation Sound and Malaspina Inlet areas. The closest communities are Lund and Malaspina Inlet. Nearby provincial parks include Malaspina, Roscoe Bay, Teakerne Arm and Walsh Cove (Figure 1).

Desolation Sound Marine Park contains 8449 hectares of upland forests and marine foreshore located within four distinct terrestrial ecosections – Georgia Lowlands, Outer Fiordland, Strait of Georgia, and Southern Pacific Ranges – and one marine ecosection – Strait of Georgia. An ecosection unit is defined as a broad, geographic landscape unit which includes specific ecosystem characteristics. The upland park areas are typical of the lower elevation coastal areas found along this portion of Georgia Straight with dense forests, bedrock outcroppings, relatively broken and rugged terrain, and short, low volume water sheds.

Copeland Islands Marine Park contains 423 hectares of upland forests and marine foreshore located within two terrestrial ecosections – Georgia Lowlands, Strait of Georgia – and one marine ecosection – Strait of Georgia. The park contains several small islands and islets with upland forest cover, bedrock outcroppings, and relatively broken and rugged terrain.

Desolation Sound Marine Park lies within five distinct biogeoclimatic variants - Coastal Western Hemlock Very Dry Maritime (CWHxm1), Coastal Western Hemlock Dry Maritime (CWHdm), Coastal Western Hemlock Very Wet Maritime Variants 1 and 2 (CWHvm1 and 2), and Mountain Hemlock Windward Moist Maritime (MHmm1). These forest ecosystem units are defined by the presence of specific biological, geological and climatic characteristics. As with ecosections, the presence of five distinct biogeoclimatic variants within the park is an indication of both the strategic location of the park in an area where the variants converge and of the diversity of values protected by the park. Common tree species include Douglas-fir, western hemlock and western red cedar. Common under story species include salal, Oregon grape, red huckleberry, twin flower, and sword and bracken ferns. Wildlife in the plan area is typical of coastal low elevation areas and includes black bear, black-tailed deer, small furbearers, raptors, upland and marine bird species, and amphibians and reptiles. Upland snags and forest areas provide

nesting, perching and roosting habitat to a variety of bird species (e.g. raven, bald eagle, turkey vulture) that cover areas much larger than the park. The climate of the park is mild year round with abundant precipitation during winter months followed by relatively dry summers. The majority of the park is second growth forest from earlier forest harvesting or fire events – there are some pockets of old growth forest and scattered veteran trees within the second growth areas.

Copeland Islands Marine Park lies within the Coastal Western Hemlock Very Dry Maritime (CWHxm1) biogeoclimatic variant. Common tree species include Douglas-fir, arbutus and shore pine. Common under story species include dense growths of salal and Oregon grape. Wildlife in the plan area is typical of small islands adjacent to mainland coastal areas and includes black-tailed deer, river otter, raptors, and both upland and marine bird species. Similar to Desolation Sound upland snags and forest areas provide nesting, perching and roosting habitat to a variety of bird species. The climate of the park is mild year round with abundant precipitation during winter months followed by relatively dry summers. The majority of the park's forest is old growth forest although it is relatively small in stature due to the dry nature of the site and severe winter storms.

Marine habitats of the two Marine Parks are complex, varied, and provide for a wide diversity of species and marine communities. Habitats include shoreline, intertidal and subtidal areas with a variety of bottom substrates, tidal and wind conditions, and both protected and exposed locations. The shorelines of both Marine Parks are dominated by bedrock outcrops, cliffs and ramps but include thin layers of boulders and cobbles over bedrock and, smaller areas of finer, deeper sediments on top of either bedrock or rock and gravel. Deeper park foreshore areas contain shoals, reefs, submerged basins, and sediment deposits (mud, glacial till). Marine vegetation communities found within the parks include eel grass beds, some canopy kelp beds, small pockets of salt marsh areas, and shoreline species. The marine areas contain invertebrate species including clams, oysters, prawns, crabs, and sea urchins. Both Marine Parks protect greenling and rockfish spawning areas, provide limited herring spawning habitat, and provide rearing habitat for juvenile salmon. Marine mammals found within the Marine Parks would include Orcas, Dall and Harbour porpoises, seals and sea lions. The Parks contain seal and sea lion haul out areas. Marine birds include western grebes, surf scoters, cormorants, marble murrelets, black oystercatchers, and other marine related species. In particular the Parks provide heavily used winter habitat for marine bird species.

Okeover Provincial Park is very small at four hectares and protects an attractive forested shoreline and small upland area. Vegetation within Okeover Arm Park consists primarily of a heavier tree cover of western red cedar, Douglas fir, western hemlock, broad leaved maple and red alder. Understory vegetation is relatively sparse with the exception of road edges and open disturbed areas. There are also moderate size patches of invasive Himalayan blackberry. Although the park does not have outstanding vegetation values, the natural forest cover is important for protection of soils, a First Nation midden site, and for visual and noise screening for campers from adjacent roads. Wildlife values within Okeover Park are limited and dependent on habitat and populations in adjacent areas.

Species which are considered to be particularly rare or at risk from human activities may be determined to be red or blue listed species by the Province. Although no specific blue or red listed species or locations of these species have been determined to occur within the Desolation Sound Parks there are such species

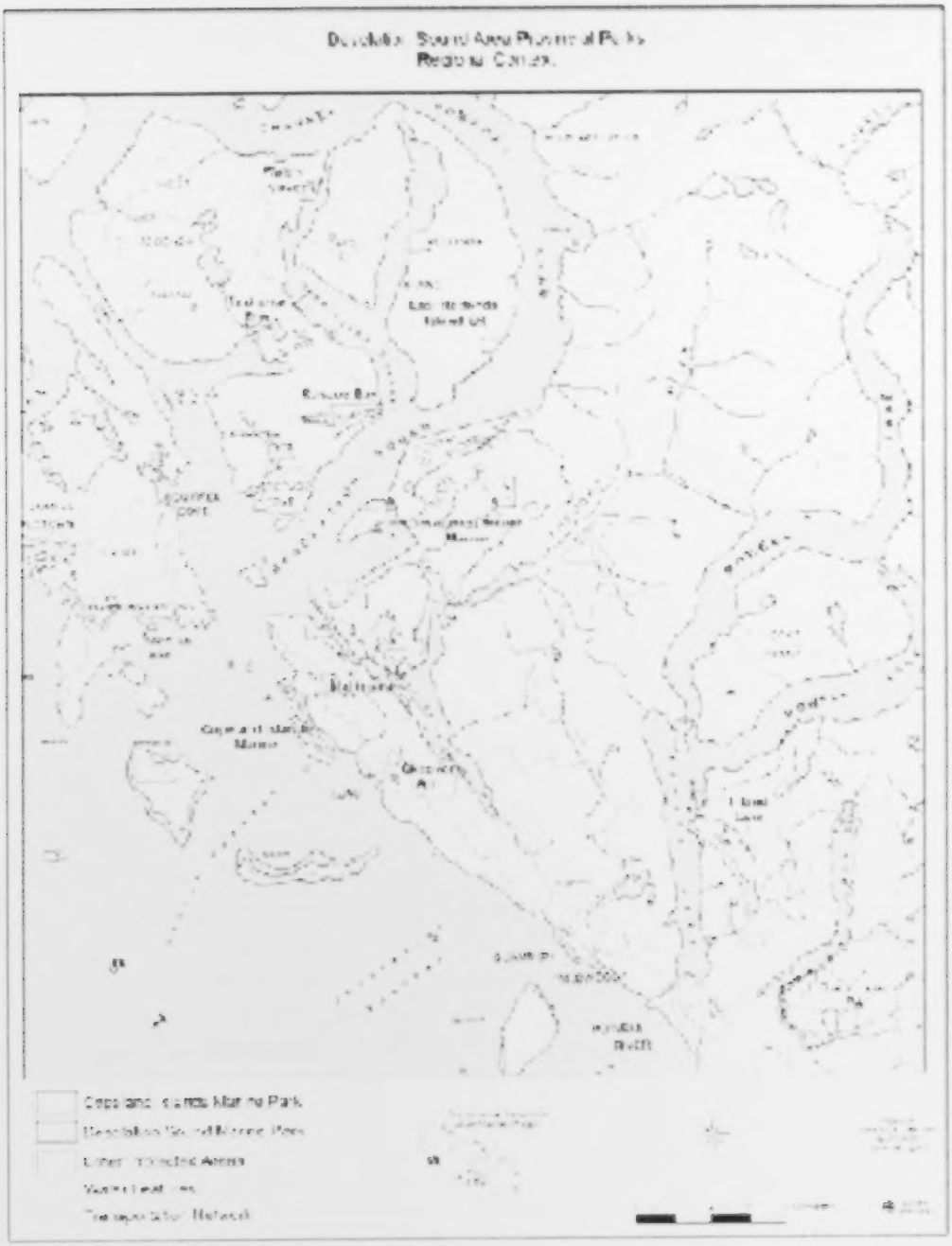
known to occur in the general area. These include Orcas, Harbour porpoises, the Northern Sea Lion, Eulachon, Western Grebe, Great Blue Heron, Surf Scoter, and Marbled Murrelet.

Desolation Sound Parks lie within the traditional territory of the Sliammon Nation. The general Desolation Sound area including the Parks is well known for traditional and historic use by Sliammon Nation people. This region is very rich in archaeological values and features and all three parks contain a wide variety of sites. These include summer camp areas, village sites, fish traps, pictographs, beach middens, and burial sites.

There are several examples of post contact European historical sites – particularly in Desolation Marine Park centred on the early logging and fishing industries and on early homesteads. Remains of this history include early logging equipment, old roads, fruit trees from homestead orchards, and altered beach and upland areas.

The Marine Parks can be accessed by boat from adjacent launching sites at Lund and Okeover Harbour or by boats from more distant regional locations. A small portion of Desolation Sound Marine Park, Cochrane Bay, is accessible by the Sunshine Coast hiking trail (see Figure 2). No part of the Marine Parks is directly road accessible. Okeover Arm Park is road accessible off of Highway 101 near Lund and lies immediately adjacent to the Okeover Harbour Authority's boat facility.

Recreation activities within the Parks include camping and day use at Tux'wnech Okeover Arm Provincial Park and kayaking, boating, canoeing, swimming, diving, and nature appreciation at Desolation Sound and Copeland Islands Marine Parks. Desolation Sound Marine Park also offers hiking and backcountry camping opportunities at Cochrane Bay, limited hiking on other trails within the park and both marine and freshwater fishing opportunities. Recreation facilities within the marine parks are limited and consist of the backcountry trail systems, a small number of undeveloped backcountry campsites, pit toilets, and directional and interpretive signage. Desolation Sound and Copeland Islands Marine Parks are heavily used by boaters and kayakers from the late spring to early fall season as a very popular destination for marine park users. Tux'wnech Okeover Arm Provincial Park has a small developed vehicle campground, a small day use area and associated facilities. Okeover Park serves as an access and staging point for kayakers, canoeists and small boaters into Desolation Sound Marine Park and Malaspina Inlet. The Park's automobile based camping and day use opportunities are focused on the shoreline and waters of Malaspina Inlet.



Relationship to Other Land Use Planning

The Desolation Sound Parks were established in the 1970's to provide marine recreation opportunities and to protect both upland and marine conservation values. The individual dates of designation were Copeland Islands in 1971, Desolation Sound in 1973, and Okeover Arm in 1979. In 1996 the Lower Mainland Protected Area Strategy supported the continued designation of these park areas and recommended the addition of the Curmie Islands to Desolation Sound Marine Park. This area was added to the park in 1999.

Desolation Sound Marine Park and Tux'wnech Okeover Arm Provincial Park border the Malaspina Complex Integrated Coastal Plan area. The Coastal Plan will provide direction for mariculture, tourism and other land uses on the crown land adjacent to the park areas within Malaspina Inlet. Although the plan areas are distinct and the park and coastal plans do not provide specific directions for lands outside their jurisdiction, it is essential that both plans are integrated with management directions of the adjacent areas.

Management Issues

Key issues for Desolation Sound Parks include:

- **Protection of natural and cultural values:**
  Management directions must protect natural and cultural values while allowing appropriate types and levels of recreation uses. The park areas protect important natural and cultural values in a location with very popular and high value marine recreation opportunities. This situation provides both a challenge and opportunity for complimentary and appropriate management for natural, cultural and recreation values.

- **Managing for adjacent marine water quality:**
  Parts of Desolation Sound Marine Park are adjacent to a significant mariculture area. Boaters' use of anchorages and kayakers' use of upland areas within the park has led to concerns regarding recreational impacts on water quality. Strategies must be implemented that will manage these impacts while allowing for continued recreation uses.

- **Integrated management across park boundaries:**
  BC Parks and outside agencies and stakeholders must work in a co-operative manner to ensure cross-boundary values such as water quality, wildlife habitats, recreation trails and visual quality objectives can be integrated with other land management decisions.

- **Identification of appropriate types and levels of recreation use:**
  There is a need to clearly identify the locations, types and levels of recreation use and facilities that are appropriate within Desolation Sound Parks. This identification would include levels of facilities, access points, types of recreation allowed, presence of campfires, location of overnight camping, and locations of trails. Kayak use has significantly increased in the last decade and there is growing pressure for additional facilities for overnight camping for kayakers and small boaters.

- **Docking facilities to private lands:**
  There are three private land areas surrounded by park land and foreshore areas – these are located at Portage Cove, Galley Bay and Malapina Estates near Grace Harbour. These lands are only accessible by boat and rely on dock facilities located within park foreshore areas. In most situations under the Provincial Park Act private docking facilities would not be allowed within a Provincial Park. A strategy must be implemented to allow continued access while bringing these facilities into compliance with the Park Act.

- **Commercial recreation opportunities:**
  Involvement in commercial recreation within the park and adjacent areas has grown significantly with the park areas being an important resource and destination for commercial recreation activities. There is a need to clearly identify the role and involvement of commercial recreation within the park.

THE ROLE OF THE PARKS

The roles of the Desolation Sounds Parks as described below, together with the following Vision Statement for the park, guide the management activities outlined within this management plan. These roles are consistent with the broader Protected Area Strategy Goals and with the BC Parks System Goals.

Provincial and Regional Context

The Desolation Sound Parks are located in the north eastern portion of Georgia Strait to the north and east of Powell River and Lund in the Desolation Sound and Malaspina Inlet areas. This area is accessible by the BC Ferries system, by air and by boat. The general Powell River area is an easily reached destination for tourism and recreation users from the large regional populations in the Lower Mainland and Vancouver Island areas and from north western Washington. It is likely that as regional development increases and changes in recreation opportunities outside the park occur that the importance of the park values will increase.

Nearby provincial parks include Malaspina, Roscoe Bay, Teakerne Arm and Walsh Cove (Figure 1). The Desolation Sound Parks and the adjacent parks and the local communities have historically been oriented towards marine recreation and tourism activities and as part of the larger Sunshine Coast region contribute to a more diverse tourism and economic base.

Conservation Role

The conservation roles of the Desolation Sound Parks are to protect significant underrepresented upland and marine natural values and to protect an area rich in culturally significant First Nation values and sites. This conservation role is particularly focused on the complex interaction of natural values found in between five terrestrial ecosections, one marine ecosection and five biogeoclimatic variants and the associated vegetation and wildlife species.

Conservation goals of the Province's Protected Areas Strategy include representation of the natural diversity and protection of special or specific individual natural values within a park. One of the tools in measuring relative importance of a park area is to analyze the park's contribution to protection of individual

ecosections or biogeoclimatic variants. A goal of the Protected Area Strategy is to protect 12% of each ecosection or variant within the overall protected area system. The following tables provide further information on the relative importance of the Desolation Sound Parks within the provincial system.

TABLE 1. Desolation Sound Marine Park's contribution to representation in the Ecosections and biogeoclimatic variants.

Ecosection	Total of ecosection (ha) throughout Province	Amount of total ecosection protected in park system (ha (%))*	Desolation Sound Marine Park's contribution to protected ecosection (ha)**	Desolation Sound Marine Park's contribution to protected ecosection (%)
Georgia Lowlands	128,887	10,881 (8.4%)	4,518	41.5 %
Strait of Georgia Terrestrial Ecosection	72,725	3,893 (5.4%)	25	0.7%
Outer Fiordland	435,691	14,586 (3.3%)	221	1.5%
Southern Pacific Ranges	1,062,350	174,853 (16.5%)	496	0.3%

*Note: The Protected Area Strategy has a goal to protect, as is feasible, 12 % of each ecosection or biogeoclimatic zone.

Biogeoclimatic Variant	Total of variant (ha) throughout Province	Amount of variant protected in park system (ha (%))*	Desolation Sound Marine Park's contribution to protected variant (ha)**	Desolation Sound Marine Park's contribution to protected variant (%)
Coastal Western Hemlock xm1	437,683	9,058 (2.1%)	569	6.3 %
Coastal Western Hemlock dm	457,627	26,950 (5.9%)	2,179	8.1%
Coastal Western Hemlock vm1	1,940,347	135,950 (7.0%)	13	---
Coastal Western Hemlock vm2	1,233,421	107,542 (8.7%)	119	0.1%
Mountain Hemlock mm1	1,740,790	278,919 (16.0%)	59	---

*Note: The Protected Area Strategy has a goal to protect, as is feasible, 12 % of each ecosection or biogeoclimatic zone

TABLE 2. Copeland Islands Marine Park's contribution to representation in the Ecosections and biogeoclimatic variants.

Ecosection	Total of ecosection (ha) throughout Province	Amount of total ecosection protected in park system (ha (%))*	Copeland Islands Marine Park's contribution to protected ecosection (ha)**	Copeland Islands Marine Park's contribution to protected ecosection (%)
Georgia Lowlands	128,887	10,881 (8.4%)	2	.01%
Strait of Georgia Terrestrial Ecosection	72,725	3893 (5.4%)	138	3.5%

*Note: The Protected Area Strategy has a goal to protect, as is feasible, 12 % of each ecosection or biogeoclimatic zone.

Biogeoclimatic Variant	Total of variant (ha) throughout Province	Amount of variant protected in park system (ha (%))*	Copeland Islands Marine Park's contribution to protected variant (ha)**	Copeland Islands Marine Park's contribution to protected variant (%)
Coastal Western Hemlock xm1	437,683	9,058 (2.1%)	140	1.5 %

*Note: The Protected Area Strategy has a goal to protect, as is feasible, 12 % of each ecosection or biogeoclimatic zone.

With one exception, the ecosections and biogeoclimatic variants found in the Desolation Sound Parks are underrepresented in the Protected Areas System. Therefore the contribution of these Parks is significant to the protection of vulnerable ecological values, and particularly in the case of the Georgia Lowlands Ecosection is the largest contributor to the protection of this ecosection.

Many specific or individual park conservation values lack detailed inventory or site data. However due to the underrepresented protected status of the ecosections and biogeoclimatic variants found in the Marine Parks and due to the development pressures that are occurring in the region outside of the Parks it is likely that the Parks' protection of individual species and values will continue to increase in importance.

Due to its small size and the level of facility development Tux'wnech Okeover Arm Provincial Park does not have a significant conservation role.

Desolation Sound Marine Park - Biogeoclimatic Zones

Nov 2003

Desolation Sound Marine Park - Biogeoclimatic Zones

Nov 2003

Tourism and Outdoor Recreation Role

BC Parks has four recreation goals: a) tourism travel routes; b) holiday destinations; c) backcountry; and d) local and regional recreation opportunities.

The recreation role of Desolation Sound Parks is to provide destination and local and regional recreation opportunities, particularly focused on marine recreation activities. The portion of the Sunshine Coast Trail within Desolation Sound Marine Park at Cochrane Bay also provides a backcountry hiking opportunity.

Desolation Sound Parks also contributes significantly to the recreation values of the adjacent Malaspina Park and the general Desolation Sound and Malaspina Inlet areas by protecting an undeveloped natural upland viewscape for residents, boaters, kayakers, commercial tour parties, and other park visitors. The Parks also have a role in supporting and contributing to a commercial recreation and tourism base in the region by providing rental, instructional, touring and guiding opportunities for a variety of commercial businesses.

Vision Statement

The purpose of the vision statement is to identify the role and function of the parks beyond the life of the management plan. The vision statement is forward looking and describes the desired future for the parks.

VISION STATEMENT

Desolation Sound Marine Park, Copeland Islands Marine Park, and Tux'wnech Okeover Arm Provincial Park will continue to contribute significantly to the natural, cultural and recreation values of the Sunshine Coast and Desolation Sound regions. The Parks will continue to provide high quality marine focused recreation opportunities, will protect both marine and terrestrial natural values, and will protect and present as appropriate the rich cultural and archaeological values of the area. In combination with Malaspina Park, the parks will be managed as a collective with compatible directions. Public and commercial activities will be in harmony with natural values and are sustainable. Over time the rare and unique values of the two Marine Park's ecosystems will be maintained and will develop many of the original old growth characteristics.

The park will be managed in a manner sensitive to the traditional use by the people of First Nations. (Note: This portion will be completed based on consultations with Sliammon and Klahoose First Nation).

The Desolation Sound Parks will continue to contribute to the protection of adjacent cross-boundary values such as marine water quality and visual landscape objectives.

RELATIONSHIP WITH FIRST NATIONS

The Sliammon and Klahoose First Nations recognise the Desolation Sound Parks area as part of their traditional territory. Currently, the both First Nations are involved in treaty negotiations with senior levels of government. The First Nations' contributions to this management plan are recognised and understood to be without prejudice to future treaty negotiations.

Once formal treaty agreements have been reached with the First Nations, this management plan will be reviewed to determine whether it is in compliance with treaty. If it is not in compliance, then this management plan will be revised accordingly. Changes will be made through an open public review process to build understanding of what these changes mean to the park and its use.

Presently BC Parks and the First Nations are working together to incorporate First Nation concerns and contributions into the Management Plan. The final plan will be completed based on these consultations.

Desolation Sound and Copeland Islands Marine Parks

MANAGEMENT PLAN

Environmental Stewardship
Lower Mainland Region

BC Parks

This portion of the overall plan provides more specific direction for Desolation Sound and Copeland Islands Marine Parks.

PARK ZONING

The BC Parks zoning system assists in the management of the Marine Parks. Zoning is used in park planning to develop general management guidelines for areas of a park on a geographical and ecological basis. Each zone reflects a general level of management with respect to natural, cultural and recreation values. Desolation Sound and Copeland Islands Marine Parks are both included in a single zone, the **Natural Environment Zone.**

Zone Objective

The objectives of this zone are to protect the upland and marine values and associated wildlife, vegetation and water resources; to protect cultural values; to assist in protection of adjacent marine water quality; and to provide marine and upland recreation opportunities with limited levels of facility development. The focus of management actions in this zone will be to create a balance between resource protection, relatively high levels of marine recreation use, and moderate levels of upland recreation use.

Zone Description

This zone includes all of the area, 8872 hectares, found within Desolation Sound and Copeland Islands Marine Parks.

Zone Rationale

This zone was chosen for the following reasons:

- The Marine Parks contain significant natural and cultural values within an area of very high quality recreation opportunities with high to moderate levels of recreation use and relatively easy marine access. A more protective zone such as Wilderness Recreation is not suitable.
- The park areas will be managed with limited facility development and are not suitable for a more intensively developed zone.
- Resources and activities through out the parks are interconnected and must be managed as a single unit or zone.

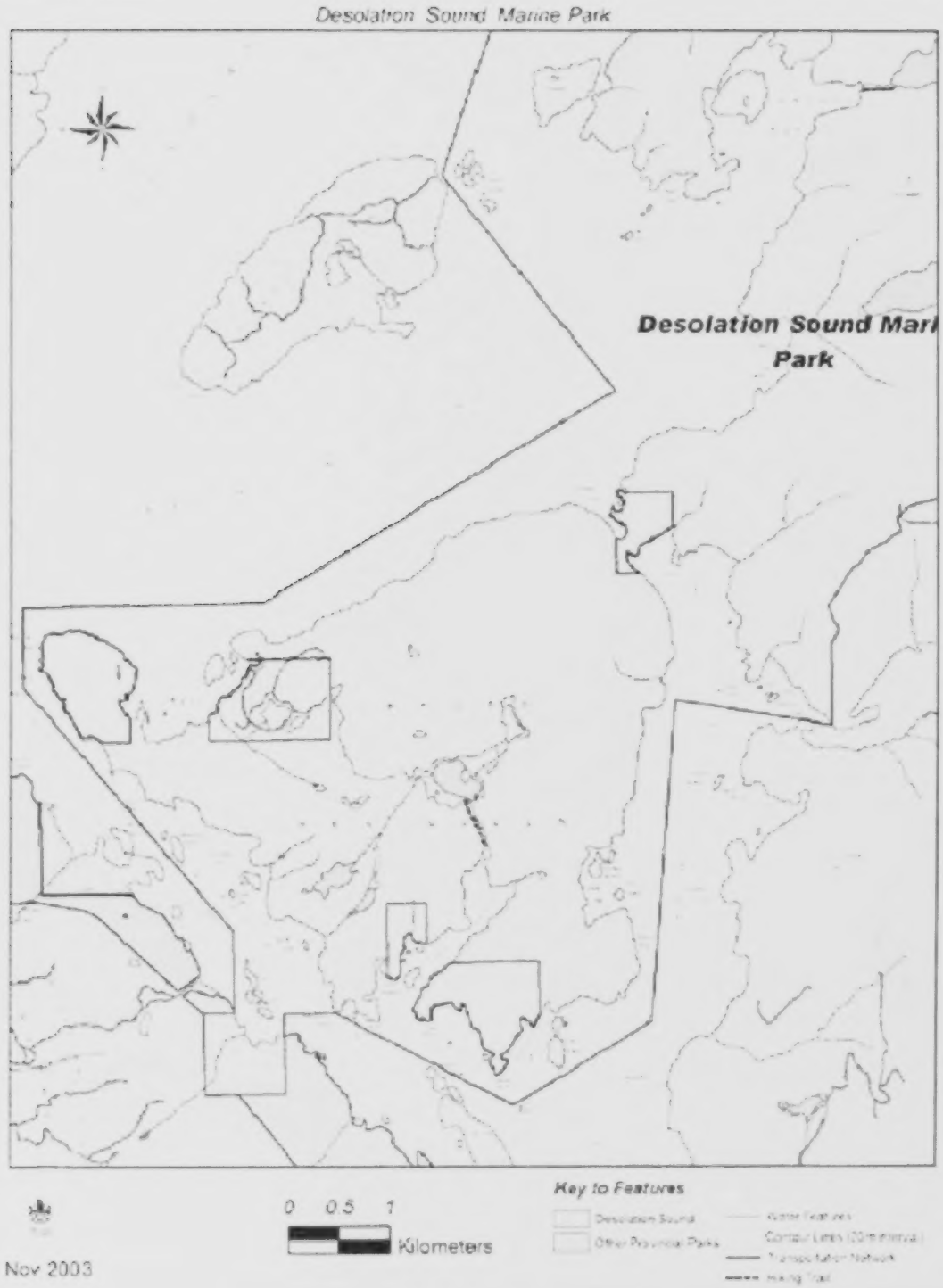
Zone Activity

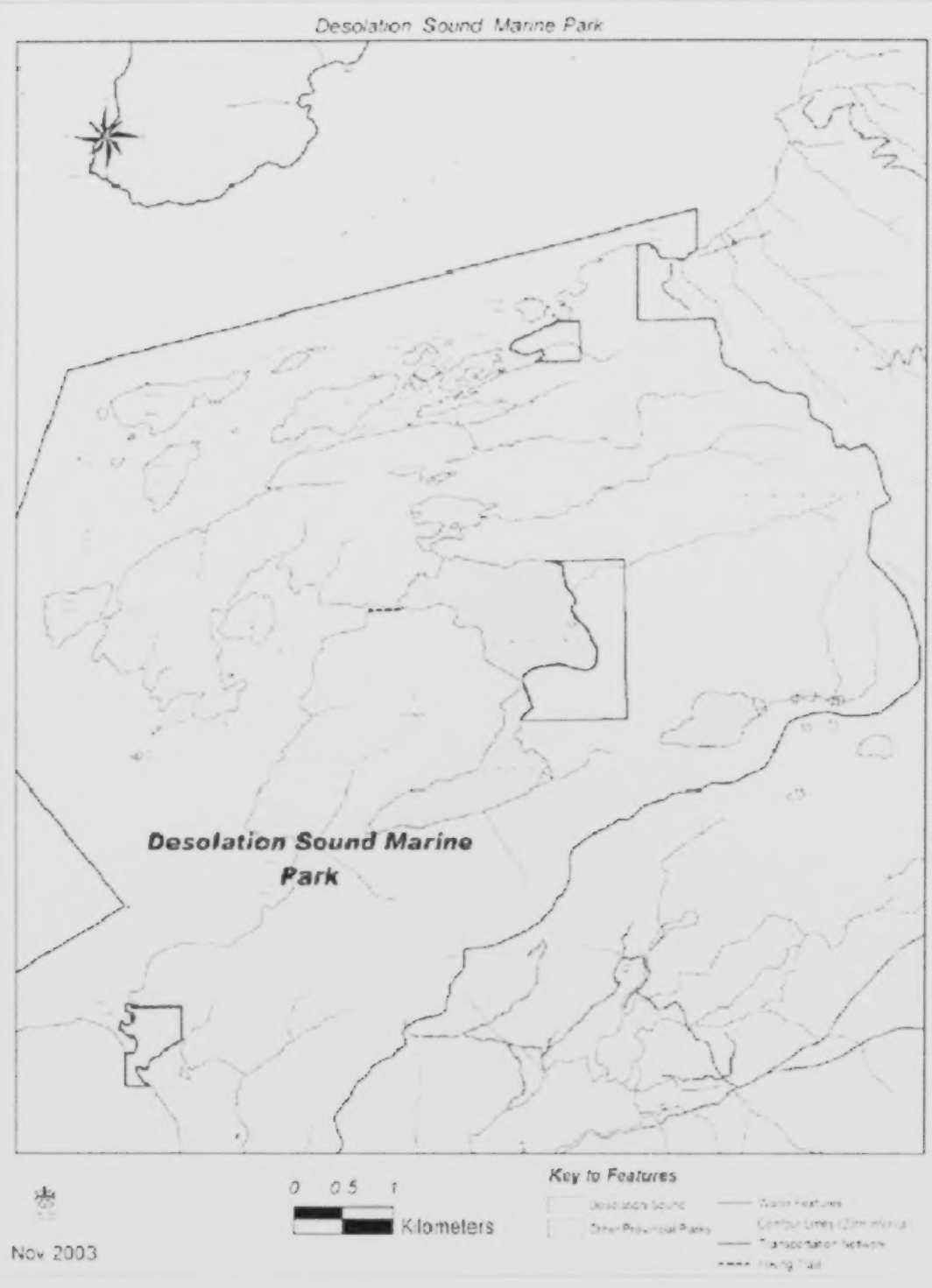
Table 3 indicates the activities and uses that will apply within the Natural Environment Zone in these parks.

Table 3: Acceptable Uses, Activities and Facilities in Desolation Sound and Copeland Islands Marine Parks.

Activity/Use/Facility	Acceptable Uses	Comments
First Nation Traditional Use	Y	Subject to conservation and public safety.
Hunting	Y	Subject to conservation and public safety.
Fishing	Y	Subject to conservation and fishing regulations.
Trapping	N	No existing trapping licence.
Horse Use/ Pack Animals	N	No appropriate facilities; potential for significant impact.
Other domestic animals	M	Restricted to domestic pets (e.g. dogs) on leash. No animals for packing.
Mountain Biking	N	No historic use; potential for significant impact.
Guide Outfitting (hunting)	N	No historic use.
Guide Outfitting (fishing, marine only)	M	No historic use in fresh water system; for conservation protection limit new commercial activities to marine areas only.
Hiking trails	Y	Development restricted to locations as shown in plan.
Overnight Camping	Y	As described in plan, developments to be dispersed or designated depending upon location within park.
Campfires	N	Closed due to sensitivity of shoreline environment, lack of driftwood fuels, and generally dry conditions of parks.
Commercial Recreation	Y	Subject to provincial policy and to objectives of management plan.
Backcountry Huts	N	No existing hut; not required in marine park.
Fish Stocking and Enhancement	M	Subject to provincial policy.
Road Access	N	No road access development is required.
Off Road Motorised Access	N	No historic use; potential for significant impact.
Commercial Motorised Water Access	M	Manage commercial marine access to maintain appropriate levels of use and impacts and to protect quality of recreation experience.
Commercial Filming	M	Subject to provincial policy.
Commercial Aquaculture	N2	Two existing tenures will continue to be permitted but will not be transferred; no new tenures will be issued; no commercial harvesting of wild or natural stocks will be allowed.
Private Land Dock Access		Direction still to be determined.
Fire Management	Y	Subject to fire management plan.
Forest Insect/Disease Control	M	Subject to provincial policy.
Noxious Weed Control	N1	Subject to provincial policy.
Exotic Insect/Disease Control	M	Subject to provincial policy.
Scientific Research (specimen collection)	M	Subject to provincial policy.
Scientific Research (manipulative activities)	M	Subject to provincial policy.

Y= allowed subject to conditions identified in the management plan
M= may be permitted if compatible with park objectives
N= not allowed
N1= allowed for expressed management purposes only
N2= present and allowed to continue but not normally allowed


Desolation Sound Marine Park
Desolation Sound Mari
Park
Key to Features
0 0.5 1
Kilometers
Nov 2003


Desolation Sound Marine Park
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Key to Features
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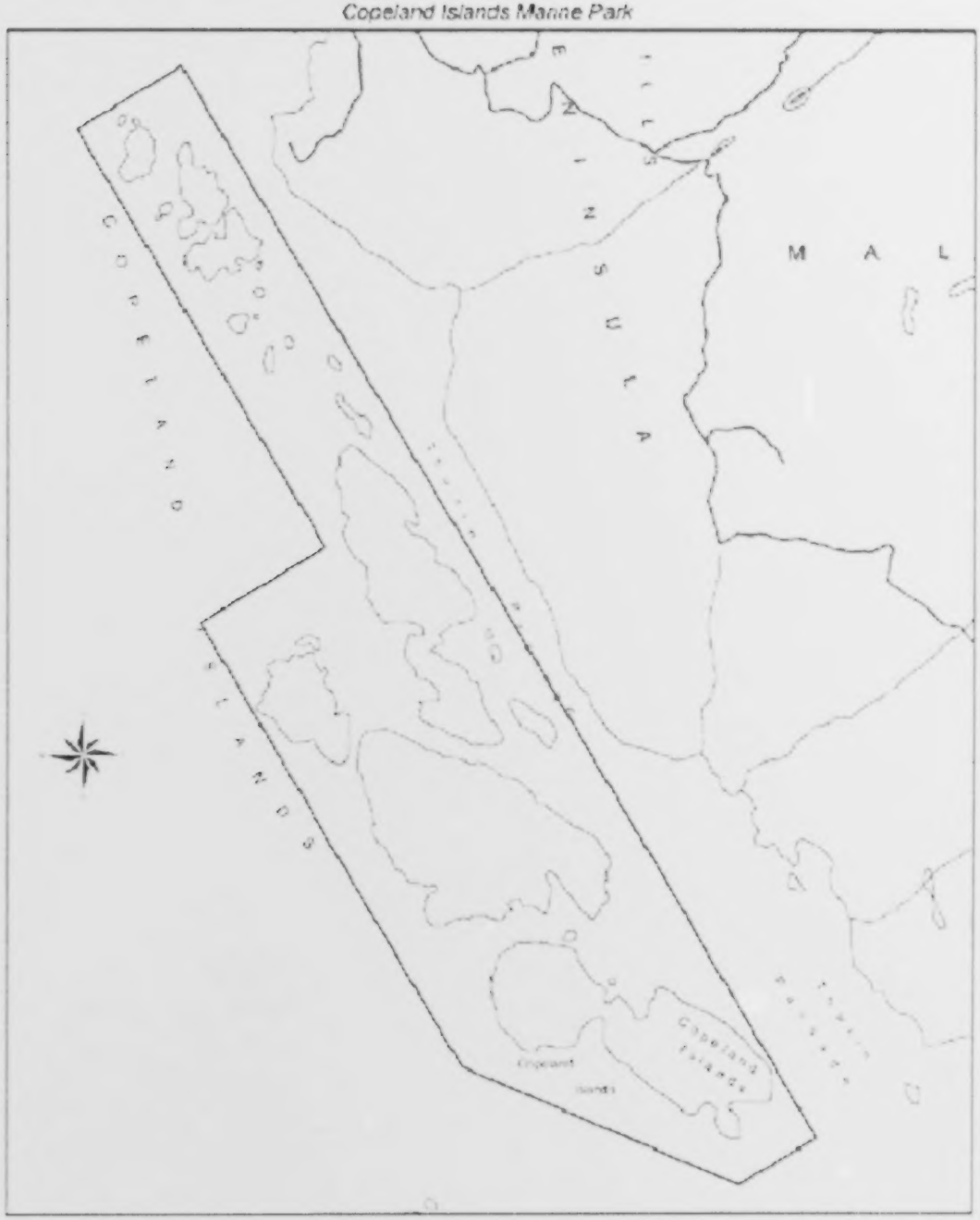
Copeland Islands Marine Park



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NATURAL AND CULTURAL VALUES MANAGEMENT

The management of natural and cultural values in the Marine Parks will be based upon the *Protected Areas Act of British Columbia*, the *Park Act*, the *Park and Recreation Area Regulations*, ministry policies and the role of the park in the overall system of provincial parks in British Columbia. The following sections of the plan provide detail on management of natural and cultural values within the park.

Land Uses, Tenures and Interests

Historically there were several mariculture tenures within the marine portion of Desolation Sound Marine Park which were purchased and then extinguished by the Province. There continues to be two existing park use permit tenures for mariculture operations within the Park which are allowed as they pre-existed the establishment of the marine areas of the Park. It continues to be the long term goal of the Province to remove the remaining two non conforming mariculture activities from the park.

There are several in holdings within park boundaries. Three of these – Unwin Lake, UBC property near Laura Cove and Portage Cove - are of interest for future addition to Desolation Sound Marine Park.

There are two subdivisions and a Sliammon First Nation Indian Reserve surrounded by land and marine areas of Desolation Sound Marine Park. These three areas and Portage Cove may rely on dock facilities located within the marine foreshore area of the Marine Park for access. Private docks would be in contravention of the Park Act but are necessary for access to these properties. A strategy needs to be developed and implemented to resolve the dock and marine access issues.

Objective:

To manage pre-existing tenures and licenses according to provincial policy and in a manner which minimizes impacts upon park values.
To implement a fair and legitimate strategy to resolve dock access issues to private lands within Desolation Sound Marine Park.

Strategies:

- Manage the two pre-existing mariculture tenures through park use permits issued under the Park Act. The tenures will be non transferable and when feasible, the tenures will be removed.
- Work cooperatively with park use permittees to minimize impacts from permit activities on park values.
- As opportunity allows, acquire in holdings – priority would be Unwin Lake, Laura Cove and then Portage Cove.
- Develop and implement fair and legitimate strategy to resolve dock issues.

Adjacent Patterns of Land Use

Adjacent land uses primarily consist of forest harvesting activities to the east and north on adjacent crown forest lands, mariculture tenures, tourism facilities, and residential developments. There are no domestic water supplies affected by activities within the Marine Parks.

The adjacent mariculture industry relies upon the high quality of the marine waters found in Malaspina Inlet and is vulnerable to any factors which would reduce marine water quality. Therefore a key management direction is to manage park activities and facilities to protect the adjacent marine water quality needs.

Tourism facilities and activities are increasingly important to the economy of Lund and Powell River. The parks make significant contributions to this economic base by providing marketable recreation opportunities and by providing outstanding scenic backdrops and values for the overall area.

The adjacent residential developments are primarily subdivisions surrounded by Desolation Sound Marine Park and on the mainland to the east of Copeland Islands Marine Park. Although associated ecological or recreation impacts on park values do not appear to be occurring at present, it is important to monitor interactions between developed areas and the Marine Parks and to manage potential impacts as they are identified.

Objective:
To protect marine water quality from impacts from park facilities or activities.
To foster adjacent tourism facilities which are compatible with protection of natural and cultural values.
To ensure park values are not impacted from adjacent developments.

Strategies:

- Manage recreation activities and facilities to ensure no sources of pollution or other impacts affect marine water quality. Work cooperatively with the mariculture industry and other government agencies to monitor and manage marine water quality. If marine water quality is found to be negatively impacted by recreation facilities or activities then undertake management actions to prevent or control those impacts.
- Work cooperatively with adjacent tourism facilities to encourage and support appropriate commercial tourism related activities compatible with continued protection of values of the Marine Parks.
- Review and monitor land use plans or activities for adjacent upland and marine areas to ensure values associated with the park have been considered. Encourage agencies, organisations and landholders to adopt appropriate management techniques that will not adversely impact park values.

Fresh Water Values

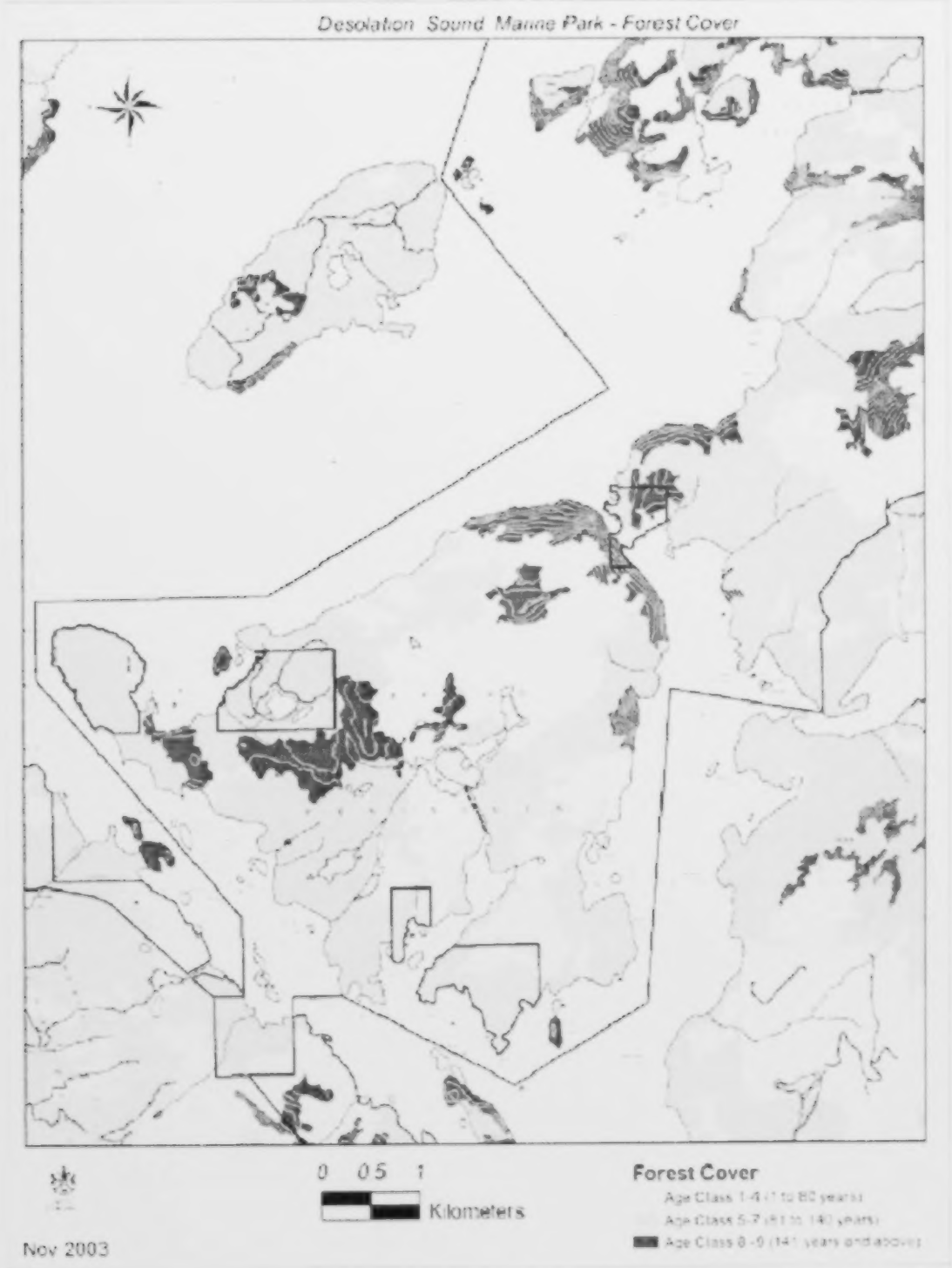
Desolation Sound Marine Park contains the larger Unwin Lake, several smaller lakes, and several streams or small springs. In general there are reasonable sources of available fresh water for wildlife species and the numerous small watersheds are a significant contributor to the diversity found in the park's ecosystem. It is important to ensure that fresh water quality remains high and that watersheds are not disturbed by recreation activities, facilities or potential outside developments or uses. In addition, protection of fresh water sources from human pollution will assist in protection of adjacent marine water quality. Due to the small size and volume of the watersheds within the park, it is difficult to ensure drinking water for recreation users is uncontaminated by animal sources and it will be necessary for recreation users to treat potential drinking water sources.

Objective:

To maintain fresh water values in a sustainable high quality condition and to protect wildlife and fish habitats dependent upon the freshwater systems.

Strategies:

- Work closely with other agencies and adjacent landowners to manage water values that extend across park boundaries. Encourage appropriate management techniques that will not adversely impact water values.
- Design recreation facilities and manage activities to maintain the quality and diversity of fresh water systems within the park. Ensure campsite, trail and toilet facilities are properly located, designed and managed. If fresh water values are found to be negatively impacted by recreation facilities or activities then undertake management actions to prevent or control those impacts.
- Provide information on minimizing impacts to water quality in the backcountry.
- To protect lakeside vegetation and a sensitive fishery at Unwin Lake, limit trail and other facility developments to areas near Unwin Creek and near the southwest corner of the lake. Connecting trails between Unwin Creek and Call Bight should be on higher upland areas, not along or near the lakeshore.


Desolation Sound Marine Park - Forest Cover
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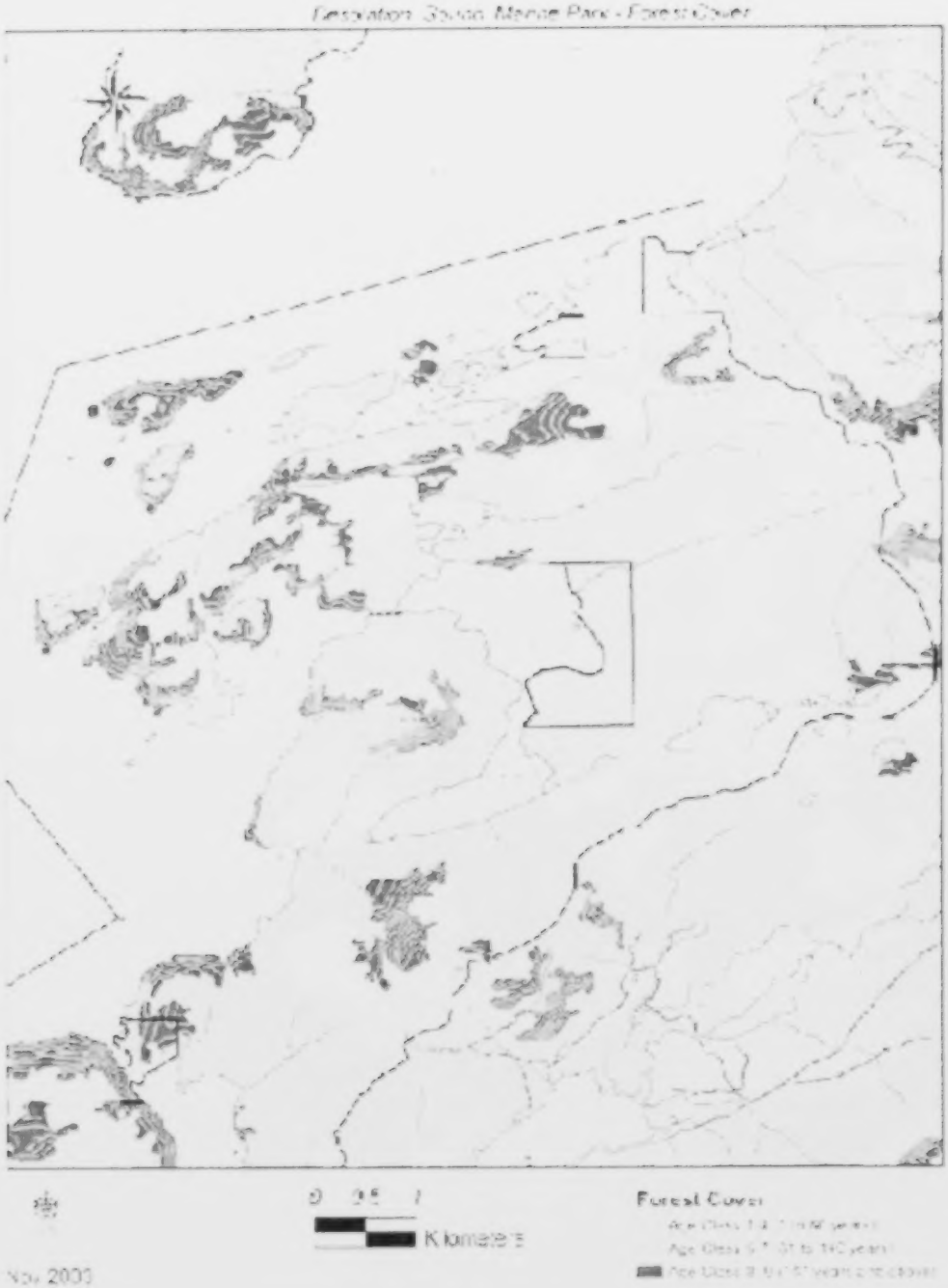
Kilometers
Forest Cover
Age Class 1-4 (1 to 80 years)
Age Class 5-7 (81 to 140 years)
Age Class 8-9 (141 years and above)
Nov 2003


Forest Cover
Kilometers
Nov 2003

Copeland Islands Marine Park - Forest Cover

Nov 2003

Upland Vegetation

Vegetation in the upland areas of the Desolation Sound Marine Park consists of a mixture of typically dense second growth stands, pockets of old growth forest, occasional veteran trees scattered within the second growth, and relatively open non treed bluffs or bedrock. The second growth areas were created as a result of earlier forest harvesting or fire events. The forest within Copeland Islands Marine Park is primarily old growth.

Common tree species include Douglas-fir, western hemlock and western red cedar throughout the Parks and red alder and broad leaved maple in previously disturbed wetter areas. Common under story species include salal, Oregon grape, red huckleberry, twin flower, and sword and bracken ferns.

The climate of the Marine Parks is mild year round with abundant precipitation during winter months followed by relatively dry summers. Soil, moisture and growing conditions vary significantly within the Marine Park areas and create a variety of growing sites. Although at this time the second growth forest is less diverse than historically present, it is anticipated that the vegetation within the park will progress into a more varied spectrum of species, sites and plant associations. As the biogeoclimatic variants in the Marine Parks are generally underrepresented and occur within a rapidly developing region the vegetation values within the Parks will continue to increase in importance and in rarity. As more detailed inventory information becomes available it is likely that additional rare or unique values and plant communities will be confirmed to occur within the park.

Objective:
To protect and conserve vegetation values and to allow natural processes to increase the diversity and succession of plant species and associations within the park.

Strategies:

- Manage vegetation values to allow the natural succession from the existing second growth conditions to a more diverse spectrum of plant types, sites and associations. In particular, protect existing pockets of old growth forest.
- Implement a fire management plan in cooperation with the Ministry of Forests. A fire management plan has been developed for the Marine Parks with objectives that include protecting public safety; maintaining natural ecosystems, habitat and diversity in the park; allowing natural processes to occur where possible; and protecting natural and cultural values within and adjacent to the park. Due to the close proximity of adjacent forestry and residential areas all forest fires will be controlled.
- Work closely with other agencies and adjacent landowners to manage vegetation values that extend across park boundaries. Encourage appropriate management techniques that will not adversely impact park values.
- Work with agencies, organisations and individuals to identify, research and monitor vegetation, particularly any rare or endangered species or plant communities. Develop a more complete understanding and inventory of vegetation values.

- Design recreation facilities and manage activities to maintain the quality and diversity of vegetation values within the park. Ensure facilities (e.g.trails) are properly located, designed and managed to minimize impacts.

Upland Wildlife

Upland wildlife values in the Marine Parks are typical of coastal low elevation areas along this portion of Georgia Strait and include black bear, black-tailed deer, small furbearers, raptors, upland and marine birds, and amphibians and reptiles. Larger or more transitory terrestrial species are dependent on areas outside of the Parks to the north or east. Park upland areas contribute shelter, food and other habitat needs to shoreline species and to some marine bird species.

Due to a lack of inventory information, specific rare and unique wildlife values the Marine Parks may protect for smaller or less known species is poorly understood. Similar to vegetation values, wildlife within the second growth forest is likely less diverse than was historically present. It is possible that as the vegetation and wildlife habitat within the park develops into a more varied spectrum of sites that the opportunity for wildlife diversity will also increase. As the biogeoclimatic variants found within the Marine Parks are generally underrepresented within protected areas and occur within a rapidly developing region, wildlife values within the park will continue to increase in importance. As more detailed inventory knowledge becomes available it is likely that additional rare or unique values will be confirmed to occur within the park.

At this time, no salmon species spawn within the fresh water systems of the Parks. Historically, there are reports of spawning salmon in Unwin Creek.

Objective:

To maintain the existing wildlife species, populations and habitats in the park and to allow natural processes to increase the diversity of the species and habitats.

Strategies:

- Manage wildlife values to allow natural processes to occur and to potentially increase the diversity of species and habitats.
- Liaise with other agencies and adjacent landowners to manage wildlife values that extend across park boundaries. Encourage appropriate management techniques that will not adversely impact park values.
- Work with agencies, organisations and individuals to identify, research and monitor wildlife values, particularly any rare or endangered species or habitats. Develop a more complete understanding and inventory of wildlife values.
- Design recreation facilities and manage activities to maintain the quality and diversity of wildlife values within the park. Ensure facilities (e.g. trails) are properly located, designed and managed to minimize impacts.
- As feasible and in cooperation with community groups and other agencies, restore access to salmon spawning areas in Unwin Creek and as appropriate re-establish spawning populations.

Marine Vegetation and Wildlife Values

The marine areas of the two Marine Parks contain 3472 hectares or 39 % of the overall Parks' area. This is the largest marine area protected in the Strait of Georgia and due to the complexity offered by shoreline, subtidal and island features protects a rich marine ecosystem. However, this ecosystem is significantly lacking in both inventory data and in knowledge of the interactions between species and values within the parks and adjacent marine areas.

Many of the marine species and values are dependent on areas outside of the park for part of their habitat or life cycle needs. The management of marine resources within the park is a shared jurisdiction between the Provincial and Federal agencies. Due to the complex interaction between adjacent and park areas and the shared management responsibilities, it is particularly important that there is an integrated and cooperative approach between agencies on the management of the marine resources.

Objective:

To develop increased inventory knowledge and understanding of the marine resources of the Parks.
To maintain the existing opportunities for marine wildlife species, populations and habitats within the park areas and to manage cooperatively marine natural values with appropriate agencies and stakeholders.

Strategies:

- Work with agencies, organisations and individuals to identify, research and monitor marine values. Develop a more complete understanding and inventory of marine values.
- Maintain closure within Marine Parks of commercial harvesting of wild stocks of shellfish. This does not include prawns.
- Support conservation of rockfish and other finfish populations in cooperation with Department of Fisheries and Oceans and stakeholders.
- Encourage appropriate viewing and interaction practices between park visitors and marine wildlife such as birds and seals.

Cultural Heritage

Desolation Sound and Copeland Islands Marine Parks contain numerous precontact and post contact culturally significant First Nation sites and are part of a culturally and archaeologically rich Desolation Sound area. First Nation cultural sites in the Marine Parks include summer camp areas, village sites, fish traps, pictographs, beach middens, and burial sites. The larger Desolation Sound area continues to be important for cultural and traditional use purposes to First Nations.

Desolation Sound Marine Park and the adjacent Malaspina Inlet areas have numerous homesteading or early coastal industry historical sites related to European settlement. Early sites include forestry camps, small homesteads or farms, the remains of a log flume on Unwin Creek, and early logging equipment. Desolation Sound and Copeland Islands both provided a destination for the beginnings of recreation boating in British Columbia with recorded trips as early as the 1920's.

The Sliammon First Nation and BC Parks have compiled relatively thorough information bases on the location and presence of cultural sites. There will continue to be a need to both increase inventory knowledge and to monitor the conditions of known existing sites. An important challenge is that most accessible shoreline sites have had some First Nations or European historical presence and these sites are typically the favoured locations for recreation access, facilities and activities. The presence of cultural sites can add a unique and significant richness to the recreation experience but it is necessary to manage the recreation activities to ensure protection of the cultural values.

Objective:
In cooperation with First Nations identify, protect and present as appropriate significant cultural features and values including traditional use patterns by the First Nations in Desolation Sound and Copeland Islands Marine Parks.

To protect and present early European historical sites.

Strategies:

- In cooperation with Sliammon First Nation continue to identify traditional use areas and culturally significant sites.
- In cooperation with Sliammon First Nation develop strategies to monitor, protect, and as is appropriate present culturally significant sites and manage for the continued practice of traditional activities by the First Nation.
- As part of a larger recreation strategy and in consultation with Sliammon First Nation, manage recreation facilities and activities:
    - to direct recreation use away from particularly important or vulnerable cultural sites;
    - or, where recreation activities are appropriate to continue on or near cultural sites manage those activities and facilities to avoid or minimize impacts upon cultural sites. Develop methods to protect cultural features while continuing to allow recreation activities.
- As is feasible and in cooperation with local communities and stakeholders protect and present information on European settlement sites. An example of this could include the log flume at Unwin Creek.

Landscape Setting and Feature Values

The natural forest, shoreline and island viewscape provided by the Marine Parks are an outstanding and important special feature for recreational boaters and commercial tour operators in the larger Desolation Sound area and for hikers on the Sunshine Coast trail in the adjacent Malaspina Provincial Park. Desolation Sound and Copeland Islands Marine Parks will be managed to provide an undeveloped, natural viewscape opportunity.

From within the park, one of the key recreation values are the outstanding landscape views from the Parks outward to Georgia Strait, the larger Desolation Sound area and the surrounding coastlines and islands. Some of the lands and marine waters adjacent to the Marine Parks have been developed for residential or

mariculture activities. However, at this time undeveloped areas predominate and continue to provide an outstanding viewing opportunity.

Objective:
To protect the viewing opportunities towards and from the Marine Parks.
Strategies:

- Liaise with agencies involved in adjacent development to ensure consideration is given to appropriate protection of visual values.

- Ensure any proposed development or facilities in the park are aesthetically pleasing, blend with the natural environment, and are not readily visible from adjacent marine areas.

OUTDOOR RECREATION OPPORTUNITIES MANAGEMENT

The Protected Areas Strategy goals and the BC Parks recreation management goals will be met by protecting natural, cultural and outdoor recreation values, monitoring conditions and visitor use, and working co-operatively with communities, First Nations, stakeholders and other agencies.

Recreation opportunities within Desolation Sound and Copeland Islands Marine Parks are centred primarily on activities involving larger recreation boats or ocean kayaks. Other recreation activities include canoeing, swimming, diving, and nature appreciation throughout the Marine Parks, hiking and backcountry camping opportunities at Cochrane Bay, limited hiking on other trails within the Desolation Sound Marine Park and both marine and freshwater fishing opportunities. Recreation facilities within the Marine Parks are limited and consist of a small number of campsites, limited signage, pit toilets, a limited trail system, and a short section of the Sunshine Coast trail near Cochrane Bay. Levels of use are relatively high for both larger recreation boats and for ocean kayaks.

Historically the Marine Parks' areas have seen recreation boat use since the 1920's and increasing kayak and canoe use beginning in the early1980's.

Outdoor Recreation Opportunities and Facilities

The following sections outline how recreation will be managed within Desolation Sound and Copeland Islands Marine Parks. Due to the type of recreation activities which occur in the Parks and to the intention to protect the natural viewscape, limited recreation facilities will be developed. Recreation activities will be managed to maintain a high quality marine oriented experience, to support appropriate levels and types of commercial recreation, and to ensure low levels of impacts.

Access Management

The Marine Parks are primarily accessed at marine locations by boat or kayak. Marine access is relatively easy and provides an exceptional opportunity for relatively safe, short access to marine recreation activities. Access for larger boats occurs largely independent of park management activities. Access for smaller boats and kayaks is dependent upon launching and parking areas in locations relatively close to the Marine Parks, and although this occurs outside of the Parks, there is a need to encourage and foster reasonable access opportunities for kayakers and small boaters.

There is also a hiking trail connection from the adjacent Sunshine Coast Trail within Malaspina Provincial Park to Cochrane Bay within Desolation Sound Marine Park.

Objective:
To provide reasonable access to marine recreation opportunities.

Strategies:

- Work cooperatively with the Powell River Regional District, the Okeover Harbour Authority, Sliammon First Nation and the community of Lund to encourage and maintain parking and small boat and kayak access to the Desolation Sound area. Maintain a parking and kayak launching opportunity at or near Okeover Provincial Park.
- Work cooperatively with Ministry of Forests and the forest sector to limit or restrict off road recreation vehicle access to or near the eastern boundary of Desolation Park from adjacent forest lands.
- Access to Cochrane Bay from the Sunshine Coast Trail will be managed under the direction of the Malaspina Park Management Plan. Marine access to the Sunshine Coast trail at Cochrane Bay will be allowed and information will be provided on this access. However to help protect adjacent mariculture values this access will not be actively promoted by BC Parks.

Boating

Desolation Sound Marine Park with support from Copeland Islands Marine Park and adjacent areas is one of the most prominent and popular recreational boating destinations on the British Columbia coast. The Marine Parks are used as a 2-7 day destination on their own or as part of a coastal cruise. Desolation Sound Marine Park contains three major anchorages at Prideaux Haven, Tenedos Bay, and Grace Harbour and both Marine Parks contain other smaller anchorages. All of the anchorages offer protection for boats combined with outstanding scenery, relatively warm summer water temperatures, and shoreline and upland recreation activities. This area has been used for recreational boating since the 1920's.

Generally recreational boating within the Parks requires relatively few services or management needs, has low impacts outside of anchorages, and is largely self serviced. Within anchorages there are issues with localized contamination with boat sewage and with vegetation and shoreline impacts from stern or bow tie lines. At the time of preparation of this plan, only the Prideaux Haven anchorage is closed under Federal regulations to sewage dumping. BC Parks has in cooperation with boaters instituted a voluntary sewage dumping closure at Grace Harbour.

Objective:

To provide a high quality boating experience within the Marine Parks and to manage anchorage issues in appropriate locations.

Strategies:

- Work with Federal agencies to formally close anchorages at Tenedos Bay and Grace Harbour to sewage dumping.
- In cooperation with communities and appropriate agencies, encourage and support the closure of the entire Malaspina Inlet complex (Malaspina Inlet, Theodosia Inlet, Lancelot Inlet, and Okeover Arm) to sewage dumping from recreational or commercial boat traffic.
- Monitor shoreline and vegetation impacts from stern or bow tie lines, particularly in the Prideaux Haven anchorages, and in cooperation with boating stakeholders implement management actions as necessary (e.g. stern pins).
- Close shallow lagoon and channel between Laura and Melanie Cove to anchoring to protect lagoon and channel eel grass beds.
- Work cooperatively with boating stakeholders to provide compatible upland or shoreline recreation facilities and activities. An example would be improvements to the trail to the lookout at Tenedos Bay.
- Provide information to boaters as part of broader boating information sources to encourage appropriate and ethical boating and upland behaviour, and to provide messages on safety, park values, and opportunities.

Kayaking

Desolation Sound and Copeland Islands Marine Parks offer relatively protected and safe sea kayaking opportunities coupled with superb scenery and marine exploration opportunities. In general kayakers are self sufficient, require limited facilities focused on campsites and trails, prefer a varied choice of destinations and routes, and value a natural setting with low levels of facility development. Within Desolation Sound Marine Park itself, kayakers will be encouraged to focus use away from Lancelot Inlet, Okeover Inlet and the most southerly end of Malaspina Inlet. This direction is implemented to encourage sea kayakers to move away from mariculture and sensitive marine water quality areas.

Objective:

To provide a high quality sea kayaking experience in appropriate locations within the Marine Parks.

Strategies:

- Provide information to sea kayakers as part of broader sea kayak information sources. Messages should include information encouraging sea kayakers to explore the outer areas of Desolation Sound and that the Lancelot and Okeover Inlet areas of Desolation Sound Marine Park contain no overnight camping facilities.
- Provide information to sea kayakers as part of broader sea kayak information sources to encourage appropriate group sizes (12 people or smaller), ethical paddling and camping behaviour, and to provide messages on safety, park values, and opportunities.

Hiking

In Desolation Sound Marine Park developed hiking trails presently occur at Grace Harbour, Unwin Lake, and Cochrane Bay. In addition undeveloped routes or local trails occur to a viewpoint at Bold Head in Tenedos Bay, between Unwin Lake and Melanie Cove, and along the shorelines in Laura and Melanie Coves. Hiking trail development will be restricted to the existing trails and routes and to two potential additions between Call Bight and Unwin Lake and between Call Bight and the existing Unwin Creek trail. Relocation of smaller portions of the trails for improved environmental or water quality protection, for improved access to views or recreation features, or for public safety will be allowed. Trails within the park will be developed at a BC Parks Type 3 standard (grubbed or cleared tread, .75 meter maximum width, backcountry trail).

At present trails are primarily used by boaters or kayakers and due to lack of road access it is anticipated that this pattern of use will continue. The exception to this is the Sunshine Coast trail near Cochrane Bay.

Objective:
To maintain and as feasible improve the opportunities for hiking within the park.

Strategies:

- Maintain and manage the trails within the park to minimize environmental or water quality impacts, increase public safety, and improve the quality of the visitor experience.
- Involve community and stakeholder volunteers in the maintenance and management of park trails.
- Consider and implement relocations of smaller portions of trails for environmental or water quality protection, for increased public safety, and for improved access to views or recreation features.
- Maintain and manage the Grace Harbour and Unwin Creek trails as is.
- In conjunction with the construction of a shoreline campsite in Call Bight, design, evaluate impacts and if feasible construct a trail from Call Bight to the southwestern corner of Unwin Lake.
- Design, evaluate and if feasible construct an improved trail from Unwin Creek to Melanie Cove and along the shoreline in the Melanie and Laura Cove areas.
- As a longer term goal design, evaluate and if feasible construct a trail from Call Bight-Mt Spooner-Unwin Creek.
- To protect fishery and riparian values no trail should be constructed along the overall shoreline of Unwin Lake.
- Due to small land areas and broken terrain no trails will be developed within Copeland Islands Marine Parks.
- Manage the portion of the Sunshine Coast Trail at Cochrane Bay under the direction of the Malaspina Provincial Park Management Plan.

Backcountry Camping

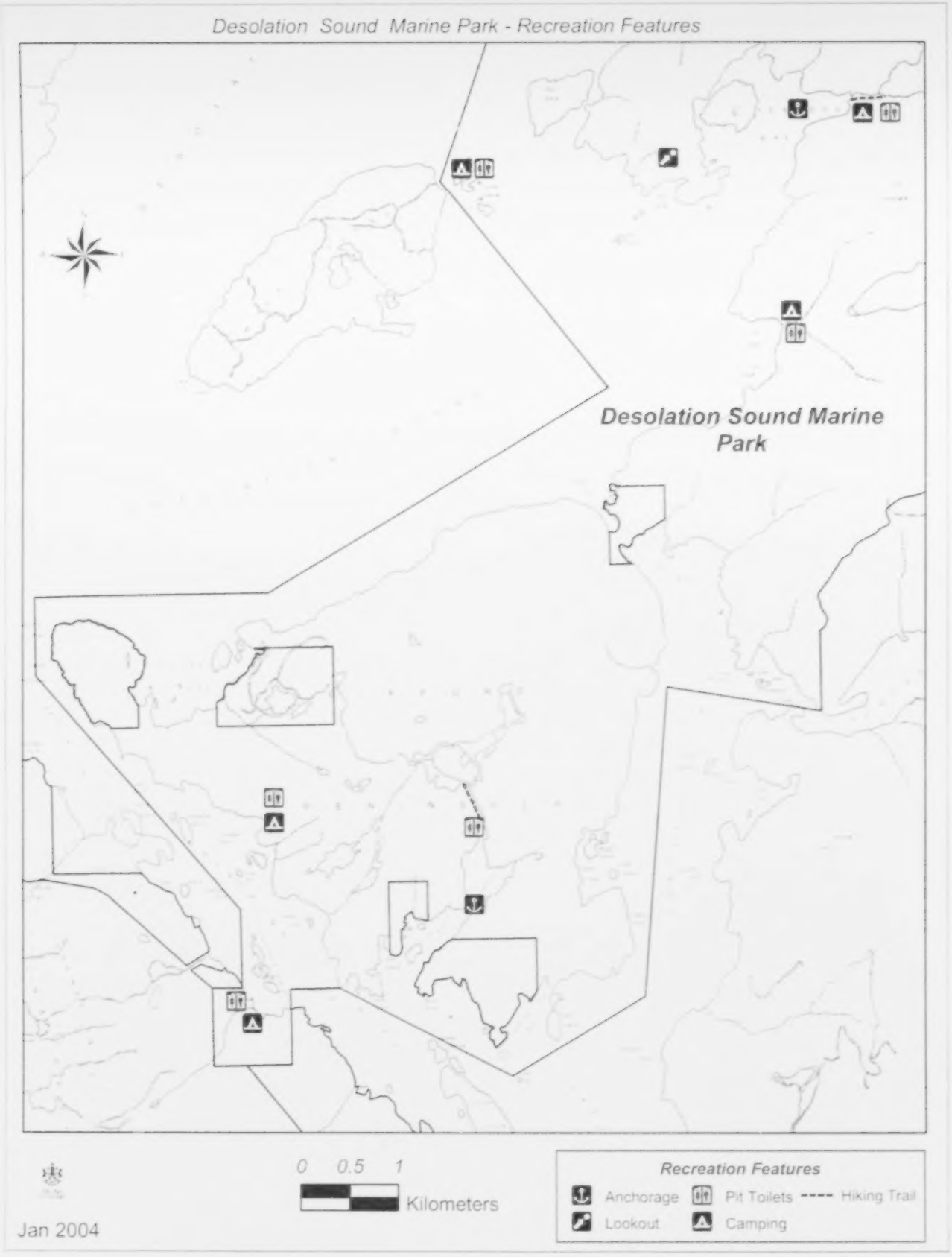
Camping will be managed to encourage appropriate levels and locations of use, to provide a quality recreation experience, to protect culturally important sites, and to encourage overnight kayak and camping use within Desolation Sound Marine Park to occur away from Lancelot and Okeover Inlet. This latter direction supports the protection of marine water quality and the adjacent mariculture industry.

Objective:
To provide camping opportunities for kayakers and other recreational users while minimising natural and cultural value impacts.

Strategies:

- Allow camping at both designated and dispersed sites as is appropriate. In general, where significant impacts begin to occur development of designated sites will be considered and if feasible constructed to manage and control the impacts. Develop benchmarks or measurements of impacts which can be used to monitor for the need to consider developing designated sites.
- In Copeland Islands Marine Park camping will only be allowed at the four existing designated locations as shown in Figure 12
- In Desolation Sound Marine Park camping will be allowed as follows and as shown in Figures 10 and 11:
    - Two designated locations in Malaspina Strait – Cochrane Bay (4-6 sites) and an unnamed site east of Josephine Island (6-8 sites). At Cochrane the sites will be on northern edge of the Bay, will be focused on hikers from the Sunshine Coast Trail and although kayakers will be allowed to use the site they will be encouraged to use alternate destinations. No other camp sites will be permitted within Malaspina Strait.
    - Designated location at Grace Harbour.
    - No designated overnight camping areas along the shoreline of Desolation Sound Marine Park within Lancelot Inlet and Okeover Arm. Initially if camping in this general area occurs it will be encouraged on sites developed outside of the Marine Park. As is feasible, implement a strategy to close this general area to overnight camping.
    - Designated locations at Call Bight (8-10 sites), Curme Islands (8-10 sites) and Tenedos Bay within the Desolation Sound area of Desolation Sound Marine Park. As well, dispersed camping would initially continue to be allowed in this general area with monitoring of impacts.
    - A local site design will be completed at Curme Islands to limit camping to 2 or 3 of the islands.
    - Dispersed camping will continue to be allowed in the Prideaux Haven area of Desolation Sound Marine Park with monitoring of impacts.
    - Kayakers would also be encouraged to use the Feather Cove camping location in adjacent Malaspina Provincial Park.
- Facility levels at each camping area would be basic and minimal. Appropriate standards would be a cleared relatively level campsite, toilets, simple benches, and food storage areas for protection for and from wildlife. Campsites might include tent platforms if local conditions (e.g. uneven or wet areas) warranted.
- As is feasible, toilets will be provided at designated camping locations. The toilet design at the Curme Islands when implemented will need to be a composting design or alternate technology due to lack of soil depth. Other toilet designs will be based on local site conditions but must ensure protection of both fresh and marine water values.
- All of Desolation Sound and Copeland Islands Marine Parks will be closed to campfires.

- To implement the above directions, as is feasible, new sites will need to be designed and developed at Cochrane Bay, near Josephine Island, Call Bight and Curme Islands. As part of the development of these sites a long term maintenance and funding strategy must also be developed.


Desolation Sound Marine Park - Recreation Features
Desolation Sound Marine Park
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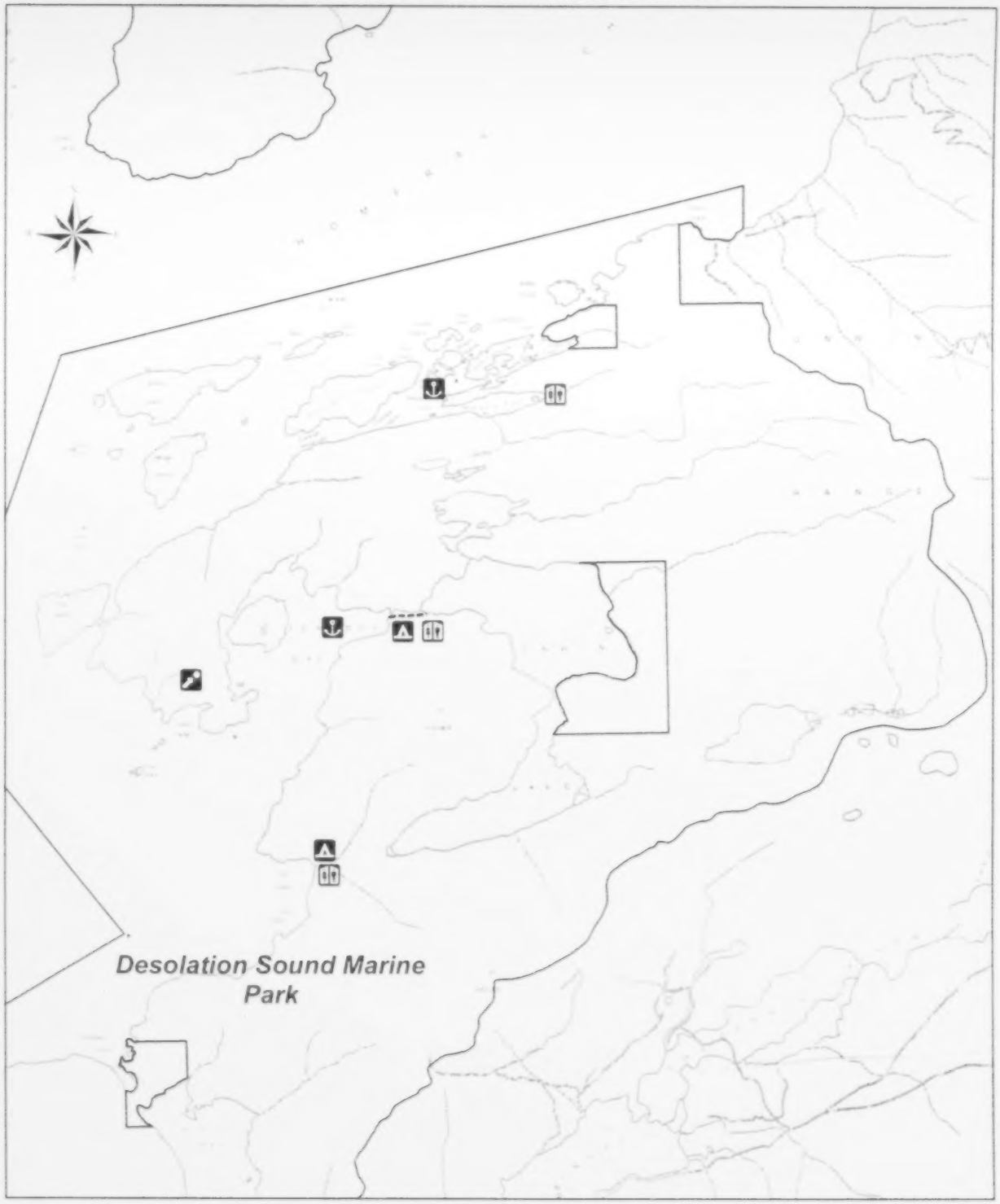
Kilometers
Recreation Features
Anchorage
Pit Toilets
Hiking Trail
Lookout
Camping
Jan 2004

Desolation Sound Marine Park - Recreation Features



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Kilometers

Recreation Features

Anchorage
Pit Toilets
Hiking Trail
Lookout
Camping

Jan 2004

Copeland Islands Marine Park - Recreation Features
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Anchorage
Camping
Pit Toilets
Jan 2004

Hunting

Desolation Sound Park is included as part of Management Unit 2-12. Species currently open to harvest (dependant on regulations) include black-tailed deer, black bear, wolf, coyote, racoon, skunk, snowshoe hare, bobcat, cougar, upland game birds and waterfowl. Current hunting pressure within the park is not measured but due to both limited access and low species populations is known to be light in comparison to other areas of MU 2-12.

Objective:

To maintain hunting as an accepted activity within the park subject to sustainability of wildlife populations, protection of conservation values, and public safety.

Strategies:

- Monitor wildlife populations and hunting activity to determine effects of hunting opportunities. Implement management actions as is appropriate.

Other Activities

BC Parks policy provides for a variety of recreation activities to take place across British Columbia's park system. However not all of these activities are suitable for each individual park such as Desolation Sound or Copeland Islands Marine Park. This may be due to their impacts on the environment, impacts on other users, the availability of other opportunities within close proximity to the park, or to the lack of appropriate facilities. Mountain biking, off road motorized activities, and the use of horses or other pack or riding animals are not acceptable activities for the Marine Parks. Table 3 provides additional information on activities within the park.

Commercial Recreation Opportunities

Commercial operations can provide a diversity of opportunities and enhanced experiences for park visitors and contribute significantly to the economy of local communities. This is particularly relevant for inexperienced visitors. Commercial recreation opportunities currently underway in the Marine Parks include sea kayak rentals and guiding, boat rentals and charters, boat tours based out of adjacent resorts, and nature appreciation activities. The Marine Parks support these appropriate and compatible commercial opportunities.

Objectives:

Support and encourage appropriate commercial recreation while protecting the natural and recreation values of Desolation Sound and Copeland Islands Marine Parks.

Strategies:

- Manage commercial activities for low impacts on both the natural and recreation values and particularly for kayak guiding for crowding or overuse impacts at overnight camping locations.
- Develop and implement a strategy to involve commercial operators with helping to provide and manage basic facilities within the Marine Parks. This is particularly relevant for sea kayak guides and rental operations.

VISITOR INFORMATION

Visitor information will be provided on Desolation Sound and Copeland Islands Marine Parks to build support, understanding and protection for the Parks' natural, cultural and recreation values, to implement the Parks' management plan, and to meet the needs of continued effective management of the park.

Awareness

Information will be provided to enhance the visitor's experience in visiting and understanding the resources of the Marine Parks and to encourage appropriate use in appropriate locations. Information provided within the park will be primarily focussed on safety, regulatory, or protection of cultural or natural values. Information provided outside of the Parks will include these messages and further information to assist trip planning and to encourage overnight use in locations outside of Lancelot and Okeover Inlets.

Information will be provided primarily outside the Marine Parks using the BC Parks website, in standard Environmental Stewardship Division information brochures and maps, other government information opportunities, and by broader recreation or community information opportunities. The Marine Parks will be shown as semi-remote marine destinations suitable for boating, kayaking, and other marine related activities. Information will also be provided on the sea kayak camping opportunity at Feather Cove in Malaspina Provincial Park.

As Desolation Sound and Copeland Islands Marine Parks are located away from any direct road connection to the Parks, formal highway or road signage directing the public to park areas will not be established.

Interpretive Themes

Interpretive themes will focus on the unique values found in the Marine Parks diverse terrestrial and marine environments, on the interactions between upland areas and the marine environment, and on early European history of the region. In cooperation with the Sliammon First Nation and other First Nations, themes focused on First Nation use of the area may also be explored.

Interpretive signs are not generally appropriate within these Parks due to the intention to minimize facility infrastructure. Therefore interpretive signage will only be used if there are very strong and compelling management needs which could be assisted or met by the use of in park messages. An example of this may be the need to build a strong understanding of the value of protecting cultural sites. Interpretive messages may be included within brochures or other information sources.

Management Messages

The key management messages will be the protection and management of the Desolation Sound and Copeland Islands Marine Parks' conservation, cultural and recreation values, protection of the adjacent marine water quality, and the safe and appropriate use of the park. These messages should be delivered in a manner that builds support, understanding, and active involvement with the general public and with stakeholders.

Objectives:
To provide to recreational users and the wider community key management messages on the protection and management of the park's conservation and recreation values, protection of the adjacent marine water quality, and the safe and appropriate use of the park.

Strategies:

- Provide on the BC Parks Website information on the park's conservation and recreation values, on the need to minimize impacts and to protect the adjacent marine water quality, on the need to respect adjacent activities, on the types of recreation activity appropriate for the park, on appropriate locations for recreation activities, and on ethics and methods for appropriate use of backcountry areas.
- Include similar messages on any brochures or maps produced for the park.
- Signage within the park should generally be minimal and focus on directional signs, environmental and public safety, and protection of cultural or natural values.

MANAGEMENT SERVICES

Desolation Sound and Copeland Islands Marine Parks are managed as part of BC Parks, Environmental Stewardship Division, Lower Mainland Region of the Ministry of Water, Land and Air Protection.

Safety and Health

Every normal precaution will be taken to ensure the safety and health of visitors to the Marine Parks. In the event of hazardous conditions or emergencies, appropriate strategies will be taken as defined in the Emergency Procedures Manual for the Parks.

PLAN IMPLEMENTATION

High Priority Strategies

This section will be completed at the conclusion of First Nation and public consultations in the fall of 2003.

Tux'wnech
Okeover Arm
Provincial Park

MANAGEMENT PLAN

Environmental Stewardship
Lower Mainland Region

BC Parks

This portion of the overall plan provides more specific direction for Tux'wnech Okeover Arm Provincial Park.

PARK ZONING

The BC Parks zoning system assists in the management of Okeover Arm Park. Zoning is used in park planning to develop general management guidelines for areas of a park on a geographical and ecological basis. Each zone reflects a general level of management with respect to natural, cultural and recreational values. Tux'wnech Okeover Arm Provincial Park is included in a single zone, the **Intensive Recreation Zone**.

Zone Objective

To provide an area of moderately developed recreation facilities for overnight car accessible camping, for ocean shoreline day use activities, and to support a parking and staging area for sea kayakers and small boaters accessing Desolation Sound Marine Park.

Zone Description

This zone includes all of the area, 4 hectares, found within Tux'wnech Okeover Arm Provincial Park.

Zone Rationale

This zone was chosen for the following reasons:

- The area will be managed with relatively high levels of facility development over most of the park area.
- The primary management directions will be the provision of recreation facilities, the maintenance of a natural setting over the non developed areas of the park, and the protection of First Nation cultural values and natural shoreline values.
- The area is relatively small and must be managed as a single unit or zone.

Zone Activity

Table 4 indicates the activities and uses that will apply within the Intensive Recreation Zone in this park.

Table 4: Acceptable Uses, Activities and Facilities in Tux'wnech Okeover Arm Provincial Park.

Activity/Use/Facility	Acceptable Uses	Comments
First Nation Traditional Use	Y	Subject to conservation and public safety.
Hunting	N	Park area is too small and immediately adjacent to public roads.
Fishing	Y	Fishing from shoreline subject to fishing regulations.
Other domestic animals	M	Restricted to domestic pets (e.g. dogs) on leash.
Trails	M	Limited to trails within campground area.
Overnight Camping	Y	Restricted to designated sites within campground area.
Campfires	Y	Restricted to designated sites within campground area.
Commercial Recreation	Y	Activities compatible with park purpose and plan.
Road Access	Y	Road access to campsites.
Commercial Filming	M	Subject to provincial policy.
Forest Insect/Disease Control	M	Subject to provincial policy.
Noxious Weed Control	N1	Subject to provincial policy.
Exotic Insect/Disease Control	M	Subject to provincial policy.
Scientific Research (specimen collection)	M	Subject to provincial policy.
Scientific Research (manipulative activities)	M	Subject to provincial policy.

Y= allowed subject to conditions identified in the management direction statement or management plan
M= may be permitted if compatible with park objectives
N= not allowed
N1= allowed for expressed management purposes only

NATURAL AND CULTURAL VALUES MANAGEMENT

The management of natural and cultural values in the Okeover Provincial Park will be based upon the *Protected Areas Act of British Columbia*, the *Park Act*, the *Park and Recreation Area Regulations*, ministry policies and the role of the park in the overall system of provincial parks in British Columbia. The following sections of the plan provide detail on management of natural and cultural values within the park. Due to the park's small size and its primary focus on providing recreation opportunities, this part of the plan has fewer issues and sections than for the adjacent Desolation Sound and Copeland Islands Marine Parks.

Adjacent Patterns of Land Use

Adjacent land uses primarily consist of public roads, the small Okeover Harbour Authority boat facility, a commercial restaurant development, and residential development. Although there are no mariculture operations at this time operating immediately adjacent to the Park, it does border the shoreline of the Malaspina Inlet complex. Therefore a key management direction is to manage park activities and facilities to protect the adjacent marine water quality.

In the Okeover Harbour area there is a serious shortfall of available parking for recreation visitors, industrial operations and for local residents. This has resulted in inappropriate use of park land for parking. The Okeover Harbour Authority has initiated a strong effort to provide an alternate larger parking area.

Objective:
To protect marine water quality from impacts from park facilities or activities.
To support the Okeover Harbour Authority in development of an alternate parking facility.

Strategies:

- Manage recreation activities and facilities to ensure no sources of pollution or other impacts affect marine water quality. Work cooperatively with the mariculture industry and other government agencies to monitor and manage marine water quality. If marine water quality is found to be negatively impacted by park recreation activities or facilities then undertake management actions to prevent or control those impacts.
- Support the Okeover Harbour Authority in development of an alternate parking facility. Upon completion of the construction of their facility close the areas within the park's road edges which are presently being used for parking.

Vegetation

Vegetation within Okeover Arm Park consists primarily of a heavier tree cover of western red cedar, Douglas fir, western hemlock, broad leaved maple, wild cherry, and red alder. Understory vegetation is relatively sparse with the exception of road edges and open disturbed areas. There are also moderate size patches of invasive Himalayan blackberry. Although the park does not have outstanding vegetation values, the natural forest cover is important for protection of soils, a First Nation midden site, and for visual and noise screening for campers.

Objective:
To protect and maintain the forest cover and vegetation values of the park.

Strategies:

- Work closely with other agencies and adjacent landowners to manage vegetation values along park boundaries. Encourage appropriate management techniques that will not adversely impact park values.
- Design recreation facilities and manage activities to maintain the quality and diversity of the forest values within the park. Ensure facilities (e.g. trails) are properly located, designed and managed to minimize impacts.
- As feasible remove and control the Himalayan blackberry areas within the park.

Cultural Heritage

Tux'wnech Okeover Arm Provincial Park continues to be important to the Sliammon First Nation as an accessible traditional site. The park contains an archaeological site (midden and fish trap) and continues to be used by Sliammon elders. Okeover Arm Park historically had direct connections to the various First Nation cultural and archaeological sites found in Desolation Sound and Copeland Islands Marine Parks. This is recognized by the cooperative effort between the Sliammon Nation and BC Parks in naming the park and in providing interpretive signs on traditional First Nation activities.

The Park also contains of early logging practices including stumps with springboard notches.

Objective:
In cooperation with Sliammon First Nation continue to protect and present the cultural and traditional values of the park.

Strategies:

- In cooperation with Sliammon First Nation continue to protect the shoreline shell midden.
- In cooperation with Sliammon First Nation continue to encourage the use of the park by Sliammon elders and to present, as is appropriate, interpretive messages regarding First Nations traditional use of the Desolation Sound and Malaspina Inlet areas.

OUTDOOR RECREATION OPPORTUNITIES MANAGEMENT

The Protected Areas Strategy goals and the BC Parks recreation management goals will be met by protecting natural, cultural and outdoor recreation values, monitoring conditions and visitor use, and working co-operatively with First Nations, communities, stakeholders and other agencies.

Recreation opportunities at Okeover Arm Park are centred primarily on car accessed camping, ocean shoreline day use, and as a staging area for kayaking within Desolation Sound Marine Park. Recreation facilities consist of a 17 site campground, a small grass day use area, and a limited parking area. Basic water and pit toilet facilities are also provided. At the nearby Okeover Harbour Authority facility both docks and a rustic boat launching facility are available.

The Sliammon First Nation and BC Parks have entered a cooperative operational agreement at Tux'wnech Okeover Arm Provincial Park and the Sliammon First Nation provide the recreation services at the Park.

The following sections outline how recreation will be managed within Tux'wnech Okeover Arm Provincial Park.

Access Management for Adjacent Marine Parks

Access to Okeover Arm Park is provided by public roads and requires no actions under this plan. The park provides an important role as a staging area for sea kayakers accessing Desolation Sound Marine Park and may over time play an increasing role for as an overnight stop or staging area for hikers on the Sunshine Coast Trail.

Objective:
To continue to provide staging and access opportunities for sea kayakers accessing Desolation Sound Marine Park.

Strategies:

- Work cooperatively with the Powell River Regional District, the Okeover Harbour Authority, Sliammon First Nation and the community of Okeover Arm to encourage and maintain parking and small boat and kayak access to the Desolation Sound area. Include within this opportunity information on appropriate kayaking destinations within the Marine Parks.

Camping

Camping will be managed to provide a high quality ocean side camping experience with basic facilities. The campground will remain at or near its present size.

Objective:
To provide camping opportunities for kayakers and other recreational users while minimizing impacts on natural and cultural values and on adjacent marine water quality.

Strategies:

- Manage recreation activities and facilities to ensure no sources of pollution or other impacts affect marine water quality. Work cooperatively with the mariculture industry and other government agencies to monitor and manage marine water quality. If marine water quality is found to be negatively impacted by recreation activities then undertake management actions to prevent or control those impacts.
- Manage campground activities and facilities to prevent or minimize impacts on natural or cultural values.

Other Activities

BC Parks policy provides for a variety of recreation activities to take place across British Columbia's park system. However not all of these activities are suitable for each individual park such as Tux'wnech Okeover Arm Provincial Park. This may be due to their impacts on the environment, impacts on other users, the availability of other opportunities within close proximity to the park, or to the lack of appropriate facilities. Table 4 provides additional information on activities within the park.

Commercial Recreation Opportunities

Commercial operations can provide a diversity of opportunities and enhanced experiences for park visitors and contribute significantly to the economy of local communities. This is particularly relevant for inexperienced visitors. Due to the small size of the park commercial recreation opportunities are limited within Tux'wnech Okeover Arm Provincial Park.

Objectives:
Support appropriate commercial recreation while protecting the natural, cultural and recreation values of Okeover Arm Park.

Strategies:

- Work cooperatively with commercial recreation operations to support appropriate commercial recreation within the Park. Manage commercial activities for low impacts on the natural, cultural and recreation values.

VISITOR INFORMATION

Visitor information will be provided on Tux'wnech Okeover Arm Provincial Park to build support, understanding and protection for the Park's natural, cultural and recreation values, to implement the Park management plan, and to meet the needs of continued effective management of the park.

Awareness

Information provided within the park will be primarily focussed on safety, regulatory, or protection of cultural or natural values. Information provided outside of the Parks will include these messages and further information to assist trip planning for both this park and for adjacent Marine Parks.

Information will be included in standard Environmental Stewardship Division information brochures, maps and on the BC Parks website, other government information opportunities, and by broader recreation or community information opportunities.

Okeover Arm Park will also be identified by formal highway signage on Highway 101 directing the public to the park area.

Interpretive Themes

In cooperation with Sliammon First Nation interpretive themes will focus on the First Nation historical and traditional use of the park and adjacent areas. The interpretive messages will primarily be delivered through the use of signs.

Management Messages

The key management messages will be the protection and management of Okeover Arm Park's natural, cultural and recreation values, protection of the adjacent marine water quality, and the safe and appropriate use of the park. These messages should be delivered in a manner that builds support, understanding, and active involvement with the general public and with stakeholders.

Objectives:

To provide to recreational users and the wider community key management messages on the protection and management of the park's natural, cultural and recreation values, protection of the adjacent marine water quality, and the safe and appropriate use of the park.

Strategies:

- Provide on the BC Parks Website information on the park's natural, cultural and recreation values, on the need to minimize impacts and to protect the adjacent marine water quality, and on safe and appropriate use of the park.

- Include similar messages on any brochures or maps produced for the park.
- Signage within the park should generally be minimal and focus on directional signs, public safety, and protection of cultural or natural values.

MANAGEMENT SERVICES

Tux'wnech Okeover Arm Provincial Park is managed as part of BC Parks, Environmental Stewardship Division, Lower Mainland Region of the Ministry of Water, Land and Air Protection. At the time of preparation of this plan, operational services within the Park are provided by Sliammon First Nation.

Safety and Health

Every normal precaution will be taken to ensure the safety and health of visitors to Okeover Arm Park. In the event of hazardous conditions or emergencies, appropriate strategies will be taken as defined in the Emergency Procedures Manual for the Parks.

PLAN IMPLEMENTATION

High Priority Strategies

This section will be completed at the conclusion of First Nation and public consultations in the fall of 2003.